

COURSE CURRICULUM

Overview of Yoga Therapy for Healthcare Providers – 15 hr CME

May 22-23 and Sep 11-12 (Sat-Sun) 2021

Conducted as a live Internet Course over Zoom

Life in Yoga Institute is accredited by the ACCME to provide Continuing Medical Education

All the MOC credits for the organizations below will be submitted through PARS, which is the login access provided by ACCME for ACCME accredited providers

ABIM-MOC Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 15 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

A score of 70% or better is required in the evaluation instrument to qualify for ABIM-MOC credit.

A. COURSE SUMMARY

1. COURSE DESCRIPTION: The course directed towards medical providers seeks to present a comprehensive overview of the research evidence base for yoga as a therapeutic intervention, as well as train learners on simple techniques that can be used both as preventive and therapeutic medicine.

The intent is to describe the basis of yoga and the biomedical research on yoga for therapeutic purposes and for health maintenance. The information presented will present an alternative view of life and healing process, and potentially prepare a healthcare provider for considering entirely different forms of treatment that may be less invasive and less subject to side-effects than conventional medicine, especially in cases when conventional medicine is not completely effective. This approach of healing can be used as a complementary practice for treating diseases.

Yoga for therapeutic purposes in clinical populations has been more recent in the Western World, although its roots are from India dating back to ages. Awareness of this has created an environment where the National Institutes of Health through the National Center for Complementary and Integrative Health has been funding a number of studies related to yoga regimens. The major underlying mechanisms believed to be involved in yoga's therapeutic benefit are that yoga provides stress reduction through induction of the psychophysiological relaxation response, enhancement of mindfulness and mind/body awareness, and in general restores physical and mental homeostasis, essentially allowing healing to occur naturally. Continuing research is establishing a higher level of understanding on yoga effects on the central nervous system, the neuroendocrine system, genomic expression and the immune system, and possibly a higher order understanding of the human system.

Further, the course includes:

- Case Discussions that elucidate the application of yoga therapy;
- Introduction to simple chair-based practices that are called Gentle Yoga developed by Life in Yoga Institute that can be applied in regular clinical practice.

This information is designed for healthcare providers (and potential researchers) to:

- Become aware of researched yoga therapy tools for pathological conditions;
- Consider their usage in practice directly, or if necessary with the aid of suitably experienced person in yoga therapy;
- Seek to engage in further research towards incorporating the wisdom of ancient traditional medicine into modern practices.

2. CME COURSE OBJECTIVE

After completing this activity, physicians should be able to:

1. Identify the information on the extent of non-invasive yoga practices available for patients' health management.
2. Locate the information on the extent of non-invasive yoga practices available for patients' health management.
3. Develop competency to talk about yoga to their patients as a health management tool.
4. Develop competency in simple techniques of yoga that can be applied for patients' disease care and health management.
5. Distinguish resources available to advance education on yoga therapy and complementary medicine.
6. Prepare to undertake further training to develop a high degree of expertise in yoga therapy.

3. COURSE CONTENT - Lecture & Discussion Cover:

<ul style="list-style-type: none">➤ Relevance of Yoga Therapy in Medicine➤ Understanding Yoga, Hatha Yoga, Tantra Yoga, Meditative Practices and Yoga Therapy➤ The Science and Underlying Psychophysiology of yoga practices – the mechanism of healing➤ Importance of Breathing Practices	<ul style="list-style-type: none">➤ Importance of Meditative Practices➤ Ayurveda and Practices Allied with Yoga➤ Yoga Therapy overview and discussion for Specific Disease Conditions➤ Simple techniques/paradigms for relaxation➤ Linkage with traditional medicine systems through bio-meridian approach
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Practice Covers: (a) Breathing Exercises – Bhastrika, Kapaalabhaati, Baahya Kumbhaka, Anuloma-Viloma Praanaayaama; (b) Yoga posture practices for digestion, elimination and good sleep, and musculo-skeletal toning and balance; (c) Vibration techniques of sound often called Chakra meditation; (d) Other meditation techniques (with affirmations) and Deep Relaxation

4. FACULTY – Marsha Billes, DO, Family Practice Physician, Chair of Board, Life in Yoga Institute
Sat Bir Singh Khalsa PhD, Asst Prof of Medicine at Harvard Medical School
C. Rajan Narayanan PhD, C-IAYT, Executive Director, Life in Yoga Institute
Anju Preet PhD, Assistant Director CME, Life in Yoga Institute
Dilip Sarkar MD, FACS, CAP, C-IAYT, Board member, Life in Yoga Institute.

5. COURSE ATTENDANCE LOGISTICS

EMERGENCY CALLS DURING THE COURSE for technical issues: Bal Mukund Sreejith - 617-817-7601; Sreejith – 202-412-8771.

VENUE: Zoom Internet Live Course

INTRODUCTIONS – To facilitate introductions and networking, attendees if they wish may send to Dr. Anju Preet (anjupreet@gmail.com, 571-209-7336) their picture (max 700kb) and a short biographic career profile not exceeding half a page – about 200 words – with any contact information they wish to provide at least two weeks before the event and this will be shared with all participants.

B. DISCLOSURE

All the faculty/speakers, and the planning committee members have declared:

- That they have no financial relationships with any commercial interests in the past 24 months;
- They will not accept financial remuneration directly from any commercial supporter for this program;
- They will uphold academic standards to insure balance, independence, objectivity and scientific rigor in their roles in this program.

C. COURSE DETAILS

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1. COURSE AGENDA AND SCHEDULE

Saturday (CME hours: 5 hours lecture + 3.5 hours practicum)

PRACTICUM-1

Pre-course Attendance to Experience Group session is Optional (maximum of 2 additional credits):

9:30 am to 11:30 am (2 hr) – Experiencing a Group Yoga Therapy Session - SARKAR

11:45 am to 12:00 noon – Course Introduction - COURSE DIRECTOR

1. Introductory Overview

12 noon to 1 pm (1 hr) - Place of Yoga in Medicine - Overview - SARKAR

2. Research Evidence Overview

1:05 to 1:35 pm (0.5 hr) - The Psychophysiology of Yoga: A Review of the Research & Science –KHALSA

1:40 to 3:10 pm (1.5 hr) - Overview of Yoga Research by Disease Categories – KHALSA

3. Philosophy of Therapy

3:15 to 4:15 pm (1 hr) - Philosophy of Yoga, Therapy Models and Bio-meridians - NARAYANAN

4. Yoga Application in Therapy

4:20 to 5:20 pm (1 hr) – Introduction to Simple Practices Relevant for Clinical Practice -
NARAYANAN and PREET

PRACTICUM-2

5:30 pm to 7 pm (1.5 hr) - Gentle Yoga Class – NARAYANAN

Sunday (5 hours + 1.5 hour practice)

PRACTICUM-3

7:00 am to 8:30 am (1.5 hr) - Gentle Yoga Class with Mindful Meditation – NARAYANAN and PREET

5. Application of Hatha Yoga and Ayurveda in Cases

11 am to 12:30 pm (1.5 hr) Key Hatha Yoga and Ayurveda Elements related to Yoga Practices: Mudras and Shat Kriyas of Hatha Yoga and Dinacharya - SARKAR

12:35 pm to 1:35 pm (1 hr) Cases Presentations - SARKAR

6. Bringing Yoga Therapy in Clinical Practice

1:40 pm to 2:10 pm (0.5 hr) A Clinician's Experience of Bringing Yoga to Medical Practice - BILLES

2:15 pm to 3:15 pm (1 hr) Life in Yoga Approach to Clinical Practice - NARAYANAN

3:20 pm to 4:20 pm (1 hr) Summary of Integrative Medicine Application of all Learning - BILLES

4:20 pm to 5:15 pm – MOC Exam, Evaluations and Credit claim

5:15 pm to 5:30 pm – Discussion of Exam Answers

OPTIONAL PRACTICUM (Substitution for morning)

(The following session may be substituted for the morning session for credits)

Option to attend 5:30 pm to 7 pm - Gentle Yoga Session – NARAYANAN

2. PRESENTATION SUMMARIES

Saturday 9:30 am to 11:30 am

PRACTICUM - 1

Experiencing a Group Yoga Therapy Session

DILIP SARKAR

This session, presented by a physician, is designed to demonstrate a practice regimen and begin to understand the physiological impact of yoga practices.

We will begin with light loosening exercises consisting of:

- SITTING: Dandasana (sit straight, staff pose)
- Pada mushtikasana: Toes bending, Pada Chalanasana: Foot rotation,
- Chakki Chalanasana: circular grinding movement
- Kulha (hindi for hip) Chalanasana: Foot over other straight leg, hug the knee and push it to the floor
- Badhakonasana (feet together, knee on side) with Titliasana (butterfly)
- Hasta Chalanasana: Hand in front, open & close
- Skanda Chalanasana: move shoulder in a circular motion front and back. Hands on shoulder and move elbow circular way, front and back. Hold wrist, behind head, pull down
- Brahma Mudra: Neck rotated in 4 directions

Breathing practices covered will include Bhastrika, Kapaalabhaati, Baahya Kumbhaka, Agnisaar, Anulom-Vilom, Bhramari, Ujjayi and Udgeet.

Saturday, 11:45 am to 12:00 noon

Course Introduction – No credits for this segment

NARAYANAN, COURSE DIRECTOR

This is a Course Overview by the Course Director that covers the following:

- Zoom Resources and Course Conduct
- CME Requirements
- Course Objectives
- Agenda Schedule
- Faculty
- Course Material – Presentation segments, Demonstration & Practice

Saturday, 12:00 noon to 1 pm

Place of Yoga in Medicine - Overview

DILIP SARKAR

Yoga has evolved as one of the most reliable, authentic and efficient health care systems available in society today. Most people believe that daily practice of yoga and maintenance of a yogic lifestyle produces better health benefits than regular exercise. These yogic health benefits are useful as therapy for chronic lifestyle-related diseases like diabetes, hypertension, heart disease, arthritis, chronic lower back pain, asthma, stress, and depression.

This segment of the course will cover the following:

1. Discussion on the State of Yoga Therapy Today – which will cover the following:

- Yoga in Medical Research - Extent of publications and PubMed (US National Library of Medicine) citations
- Perception among the general population – media and public institution portrayal
- Popular Health Views of Yoga
- Understanding of How Yoga Therapy Works
- Yoga and Integrative Medicine
- Involvement of tertiary medical centers like the renowned Cleveland Clinic

2. Brief discussion on the Philosophy of Yoga Therapy – which will cover the following:

- The roots of Yoga
- Yoga's perspective on physiology, psychology and psychiatry
- The notion of health and health management from the yoga perspective
- The eight limbs of yoga

Yoga Therapy is lifestyle management -- the process of empowering individuals to progress towards improved health and well-being through the application of the philosophy and practice of yoga. It is important for physicians to understand this approach which is quite different from the Disease Management approach with bio-chemicals.

The conclusion of this presentation will be that Yoga Therapy can be used in conventional medicine to treat chronic diseases. Because most chronic endogenous diseases present themselves with acute onset, standard evidence-based conventional therapy should be started at that point, along with personal lifestyle modifications through Yoga Therapy. Over time, Yoga Therapy will improve one's underlying condition and chronic dependence on drugs can be slowly withdrawn, resulting in reduced side effects and improved, drug-free and healthy living.

Psychophysiology of Yoga & Overview of Yoga Research by Disease Categories

SAT BIR KHALSA

This segment is really two presentations covered in two sessions totaling two hours:

- A. Psychophysiology of Yoga – an overview of the underlying psychophysiological effects of the basic practices within yoga, and how these are relevant for therapeutic benefits in patient populations.
- B. Research Report on Yoga Therapy – a review of the existing biomedical research evidence base of clinical trials supporting the efficacy of yoga for specific disease conditions.

A. PSYCHOPHYSIOLOGY OF YOGA

This segment seeks to establish connection between yoga philosophy (covered earlier in the course) and the underlying mechanisms in yoga practice and how these are relevant to therapeutic benefit in disease treatment.

Yoga is a practical discipline incorporating a wide variety of practices whose goal is the development of a state of mental and physical health well-being, inner harmony and ultimately “a union of the human individual with the universal and transcendent Existence” (1). These practices are believed to have originated in early civilization on the Indian subcontinent and have been practiced historically in India and throughout East Asia. Yoga techniques include the practice of meditation, deep relaxation practices, regulation of respiration with a variety of breathing exercises, and the practice of a number of physical exercises and postures, in which the focus is more on isometric exercise and flexibility than on aerobic fitness.

A general feature of these practices is their capability of inducing a coordinated psychophysiological response, which is the antithesis of the stress response. This “relaxation response” consists of a generalized reduction in both cognitive and somatic arousal as observed in the modified activity of the hypothalamic pituitary adrenal axis and the autonomic nervous system (2). Bagchi and Wenger (3), in their early classic yoga research study wrote “...physiologically Yogic meditation represents deep relaxation of the autonomic nervous system without drowsiness or sleep and a type of cerebral activity without highly accelerated electrophysiological manifestation but probably with more or less insensibility to some outside stimuli for a short or long time.” A large number of subsequent research studies examining the effects of these techniques both in isolation and in combination have further confirmed these early results (4-9). Both short term and long-term practice of yoga techniques are associated with reductions of basal cortisol and catecholamine secretion, a decrease in sympathetic activity with a corresponding increase in parasympathetic activity, reductions in metabolic rate and oxygen consumption and salutary effects on cognitive activity and cerebral neurophysiology.

Studies related to the brain have utilized a variety of outcome measures including electrophysiological recordings (EEG), evoked potential recordings and brain imaging techniques. Both short term and long-term changes in brain function and anatomy have been investigated in both novices and experienced

meditators. This emerging evidence is providing detailed information on the specific brain regions affected by contemplative practices and on the interaction between different brain regions during contemplative practices. This work has elucidated potential mechanisms underlying the effectiveness of these practices for both normal and patient populations and has suggested practical applications for mental health and both cognitive and emotional functioning.

B. YOGA THERAPY RESEARCH REVIEW

Not surprisingly, the capability to affect psychophysiological functioning has led to the implementation of these techniques as a therapeutic intervention in a number of disorders which have psychosomatic components. Historically, this limited application of yoga techniques for specific disorders is relatively recent relative to the ancient Vedic origins of yoga (10). Gharote (1987) has stated that “the therapeutic aspect of yoga does not feature in any of the traditional systems of self-help, except in the yoga sutras of Patanjali where we come across the word vyadhi meaning ‘disease’ in the list of disturbing factors of mind that are obstacles to liberation. ... although yoga therapy was not a developed branch of yogic discipline as such, we do get a glimpse of the therapeutic effects of the practices in some of the hatha yoga literature such as the Hatha Yoga Pradipika. However, advice is given here within the context of practice; that is, how to deal with the complaints that arise from faulty practice” (11). In fact, since the primary goal of yoga practice is spiritual development, beneficial medical consequences of yoga practice can more precisely be described as positive “side effects” (12).

This presentation is intended to give physicians an overview on the extent of research in yoga and yoga therapy within the context of traditional yoga philosophy, with focus on certain disease areas and is divided into the following areas:

- Research on the prevalence of yoga and yoga therapy
- The history of research on yoga and yoga therapy – beginning with the first systematic medical application of yoga started in India in 1918 at the Yoga Institute in Mumbai through the emergence of a new breed of clinicians called yoga therapists and a society called the International Association of Yoga Therapists (IAYT) based in the United States. (13-19;24-27)
- Extent of yoga and yoga therapy research publications in peer-reviewed biomedical journals – countries, types of journals, types of analysis, sample sizes and chronology
- Scientific rationale and research evidence for the underlying psychophysiological mechanisms of yoga's benefit
- A review of current and ongoing biomedical research on yoga and yoga therapy by disease areas. Disease areas to be covered include Metabolic Syndrome, Cardiovascular, Respiratory, Musculo-skeletal, Neurological, Psychiatric, among others.
- Selected examples of yoga therapy research studies in each disease category.
- Future directions in yoga therapy research

The application of yoga in a limited and strictly therapeutic manner has drawn some criticism from proponents of yoga (14), given that yoga techniques are in fact part of an ancient and sacred spiritual tradition historically applied as a holistic lifestyle discipline (20). This concern has been further aggravated by the rapidly growing popularity of yoga in the west and its subsequent commercialization and application as a trendy body slimming and fitness tool (21). However, among world traditions, classical Yoga is a useful starting point for inquiry into the relationship of medical and religious health because it connects the cultivation of physical and psychological health with spiritual well-being and exemplifies the idea of religious liberation as healing” (22). Anand (1991) has stated this more simply: “The ultimate aim of medical sciences is the attainment of optimum physical and mental health for the individual. The ultimate aim of yogic practices is also the same, viz. physical and mental well-being.” (23)

A published comprehensive bibliometric analysis in 2013 has identified the current full extent of the yoga therapy studies published in research journals (34). Over 450 publications in 271 different journals published in 29 different countries on 28,080 study participants were identified. An analysis of the type of studies reported revealed that 18% of the publications were on uncontrolled studies, 45% were on randomized controlled trials, and 18% were on studies incorporating a control group that did not use randomized subject assignment. The chronological distribution of publication date indicates gradual continuing increase in publications with an exponential increase in the decade prior to the survey. The types of disorders most evaluated in yoga studies have been psychiatric conditions, cardiovascular disorders, and respiratory disorders. There are a number of cautions that should be noted in interpreting this literature including no single standardized yoga practice format, a very wide range of the types of yoga interventions and mode of application used, and a highly varied quality of research. A comprehensive edited medical textbook entitled *The Principles and Practice of Yoga in Health Care* provides a thorough coverage of the scientific research rationale behind the use of yoga for medical and psychological conditions and a full review of the clinical trials research evidence (35).

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Saturday 3:15 pm to 4:15 pm

Philosophy of Yoga, Yoga Therapy Models and Bio-meridians

RAJAN NARAYANAN

Unlike the molecular and bio-chemical approach to understand the health of the human body in the conventional medical system, the Yoga approach is to understand the nature of creation, the role of the human being and the body, and the cause of ill-health for the human body in the Cosmic sense. This develops a deeper insight of the human body and allows for treating at a level deeper than the biochemical or molecular level to address abnormalities. Thus in the yoga approach, in a theoretical sense, it is not about statistical correlations and probabilistic assessments, but rather deterministic at the highest level of creation. However, in practical application even the yoga approach has to be applied probabilistically for therapy, since the tools necessary for determinism are not fully available. However, the yoga model of determinism provides deep insight for medical practitioners coming from conventional medicine to get a glimpse of answers to many unanswered questions they may have from years of patient observation. Further, it becomes the framework for developing insight into how yoga therapy works and consider new frontiers for research. The use of Electro-Photonic Imaging developed by the Russian health system may be helpful to make yoga therapy measurable and instantly predictive.

Accordingly, this segment will discuss:

- Yoga philosophy of Creation and Role of Human Being based on the Yoga Sutras of Patanjali
- The Goal of Yoga & the Role of the Individual Body – Direct Experience and Understanding of the Cosmic System and Developing Infinite Knowledge and understanding one’s role in creation
- Yoga’s understanding of ill-health and disease condition - concluding that each person needs to be in tune with themselves (following their Dharma) for peace and good health.
- Related texts of yoga that speak on Circuitry of the Human System - The Naadi (energy channel) and Chakra System (energy distribution nodes); Concepts of Balancing and Cleansing/Energizing, and how it works at each level.
- The Five levels of Circuitry or Aura including Yoga Therapy models: Ayurveda-Yoga model, Relaxation Response Model and the Life in Yoga Model

- Discovery of the primovascular system by Korean researchers, Bio-electrical conductivity at meridian points and Electro-Photonic Imaging and its application in measuring Yoga Therapy

In this presentation, Hatha Yoga is clarified as a set of practices more focused on the physical body, as opposed to Yoga which is a system. Thus the development of Tantra/Mantra Yoga, or Bhakti Yoga (Yoga of Devotion), etc. are explained within the system but are not the core focus of Hatha Yoga exercises.

Saturday 4:20 to 5:20 pm

Introduction to Simple Practices Relevant for Clinical Practice

RAJAN NARAYANAN and ANJU PREET

As a precursor to Practicum 2 and 3 which are chair-based Gentle Yoga sessions, this presentation demonstrates and discusses the practices that are covered in these sessions. These practices are designed for easy use in clinical settings, for almost any patient who is without musculoskeletal injuries and in a stable health condition. The demonstration and discussions include the following:

- Practices include sound vibrations, breathing, gentle stretching and meditative practices;
- Practice dynamics and its psychophysiological impact;
- Application possibilities.

Practices include: Chakra vibrations, Ujjayi Pranayama/Vagal Stimulation, respiratory vibrations, Spinal alignment, Anulom-Vilom Pranayama/Alternate Nostril breathing, Kapaalabhaati, Baahya Kumbhaka, Bhramari/Nasal Humming, Bhastrika/Slow Deep Breathing, and Meditative practices.

Preet will cover mindfulness meditation, while Narayanan covers the rest of the practices and their implications for therapeutic applications.

Saturday 5:30 to 7:00 pm

PRACTICUM – 2

Gentle Yoga Class

RAJAN NARAYANAN

This will be a live practice session of the simple chair-based practices described and demonstrated earlier. The sequence will include:

- Chakra Vibrations
- Ujjayi Pranayama or Vagal Stimulation, also called Happy-face breathing
- Respiratory Mantra – HYME-IM-UM
- Spinal Alignment in gentle motion coordinated with breathing starting from the neck down and going downward
- Anulom-Vilom Pranayama or Alternate Nostril Breathing

- Kapaalabhaati
- Baahya Kumbhak
- Bhramari
- Bhastrika
- Meditation

Sunday 7:00 am to 8:30 am (substitute session 5:30 to 7:00 pm)

PRACTICUM – 3

Gentle Yoga Class with Mindfulness Meditation

RAJAN NARAYANAN and ANJU PREET

This will cover similar content to the Practicum 2 providing an opportunity for learners to develop greater familiarity with techniques that can be used in a clinical setting. In addition, imagery-based mindfulness meditation technique will be the final section of this practice.

Sunday 11:00am-12:30pm

Key Hatha Yoga and Ayurveda Elements related to Yoga Practices: Mudras and Shat Kriyas of Hatha Yoga and Dinacharya

DILIP SARKAR

This section will cover Ayurveda and other practices that may be viewed as within the purview of yoga therapy. Exposure to this gives physicians a paradigm that is deeper than the microbiology and bio-chemistry approach to understand health.

Ayurveda is an ancient Indian system of medicine that has its basis in the philosophical system of Yoga and related philosophical systems. However, it has many characteristics of modern medicine – tools and concepts of surgery, the concept of bio-chemical imbalance, the understanding of the different functional systems (digestion, circulation, respiration, etc.). Given its basis in philosophies like yoga, it offers unusual and deeper insight into diseases that is common with other complementary practices. Hence Ayurveda will be the first point of discussion before other complementary therapies.

Ayurveda presentation will cover:

- History and Texts of Ayurveda
- Principles of Ayurveda – the concept of balance
- The Three Natures: Vaata, Pitta and Kapha
- The Eight Areas of Detection for Diagnosis:
 - Detailed discussion of tongue and pulse
- Therapy in Ayurveda – diet, lifestyle, herbs and massage
- Discussion of Ayurvedic Panchakarma

The other complementary therapies fall under the category of Energy Medicine. When the human system is viewed as an electrical circuitry healing is viewed as balancing the energy flow. Ayurveda follows this same view. However it also derives techniques used by conventional medicine as relating to surgery and biochemistry to heal. Other therapies focus strictly on energy balancing. Hence for a conventionally trained physician Ayurveda provides the energy concept that is necessary to deal with other therapeutic approaches. Other such therapies will include discussion of the following:

- Mudras (typically finger positions) and Bandhas (energy locks) that serve as neuro-physical connectors to create energy balance.
- Acupressure and Marma Therapy where stimulating points release endorphins and neurotransmitters to treat various organs and correct imbalances in energy flow. Acupressure largely relies on stimulation points on the hands and feet. Marma therapy is more generic and covers other parts of the body too. Acupuncture is an allied area that is related, but will not be discussed.
- Shat Kriyas or The Six Cleansing Practices that come from the Hatha Yoga tradition will be discussed.

This presentation will conclude with a general overview of lifestyle management and drawing parallels of rituals and lifestyle approaches from different traditions that seek to provide this relief.

Ayurveda and Yoga in particular, having this understanding suggest certain daily routines that can have a prophylactic effect on the human system while promoting active healing. The Daily Routine in yogic lifestyle has the following components:

- Circadian rhythm and its effect on the body
- Practices that promote being in sync with the circadian rhythm especially exercise and food habits
- Yogic practices for promoting bowel movement
- Tongue cleansing, cleansing of the nasal passages and the dynamics of teeth cleansing
- Differences between younger, middle age and older populations

While the entire course is designed to bring back the intent of medical practice for health management instead of its disease management focus that has resulted from the economic forces that govern the industry, this particular segment and the previous segment are the bridges from concepts presented to practices. Physicians who have general family practice with patients coming on a regular basis for health check-up should pay particular attention to the ideas noted in these segments and should seek to bring some of these ideas into the lives of their patients, first beginning with themselves and their own families.

Yoga therapy is Ayurveda. Health is defined as strong digestion, easy elimination, and good night sleep. In yogic practice we have Asanas (postures) and breathing exercises for improving digestion, elimination and sleep. Demonstration and practice of these exercises will be the focus of this segment.

This presentation will be the key link that transforms a physician's thinking from the conventional approach of disease management and the conception of human physiology to a different level that makes one ready to deal with more details of yoga therapy for specific diseases.

Sunday 12:35 pm to 1:35 pm

Case Presentations

DILIP SARKAR

Through Case discussion of patients with back-pain, arthritis, hypertension and other cardiovascular disorders, Parkinson's disease, cancer, asthma and COPD, sleep apnea, diabetes and obesity, and their observed recovery, yoga therapy modality is clarified.

Sunday 1:40 pm to 2:10 pm

A Clinician's Experience of Bringing Yoga to Medical Practice

MARSHA BILLES

A practicing physician who has employed yoga therapy with her patients explains with regard to the following topics:

- Practice constraints and working with them to employ yoga therapy – this will include space considerations, use of chair-based yoga therapy, limitations related to practice partner/s or owner's views, liability, and billing
- Group versus individual therapy;
- What motivates a physician to provide yoga therapy

Sunday 2:15 pm to 3:15 pm

Life in Yoga Approach to Clinical Practice

RAJAN NARAYANAN

This presentation is a summary of all material covered with thoughts on how physicians can use the learning for themselves and for their practice.

This part will deal with the Life in Yoga Approach to customizing yoga regimen for each person's needs. The practice and discussion elements include the following:

- Yoga Therapy Applications in General Medical Practice – preventive versus therapeutic.
- The Importance of working with exercises in five levels: physical, breathing, vibration, thought and pure observation.
- The three types of exercise modalities involved in yoga practices, and the differences in their physiological impact and as explained by the yoga concept of cleansing. Hatha Yoga, Tantra Yoga and Rhythmic exercising approaches will be discussed.

- The importance of spinal alignment and sequence in exercises.
- Learning to customize practices for each person: working with physical and other disabilities, and lifestyle factors.

To develop this customized approach, one requires the right paradigm to assess a person's natural activity and abilities, and also understand the ways in which exercises can be performed with varying effect. In this context stress at five levels and the methods of stress management are also discussed.

A system developed by Life in Yoga Institute called Measured Yoga Therapy and Unified System of Medicine is introduced and cases of application to patients are discussed. The research basis related to EAV (electro-acupuncture) and EPI (Electro-photonic imaging) is also discussed.

In addition to this segment, a conclusive perspective on the course is provided. Since this is only the first exposure to yoga therapy, for those interested opportunities for progressive learning will be indicated, while reiterating the course objectives.

Sunday 3:20 pm to 4:20 pm

Summary of Integrative Medicine Application of all Learning

MARSHA BILLES

This is a conclusive overview of the course relative to how physicians should assimilate the learning and consider bringing it into their practice. The summary overview touches on:

- Yoga's contribution to the physician's knowledge base and medical perspective, including a summary overview of yoga concepts
- Yoga's potential impact on quality of patient care – appropriate and inappropriate use of yoga
- Building an integrative medicine model in patient practice

Sunday 4:25 pm to 5:25 pm

MOC Quiz, Course Evaluation and Credit claim

For those seeking MOC credits in addition to CME, there will be a requirement to take a quiz and score at least 70% for get the MOC credits. Immediately after submission of the quiz answers, the quiz questions and answers will be discussed in about 15 minutes. Thereafter, course evaluation and credit claim forms will need to be filled.

Those not requiring MOC credits can complete the course evaluation and credit claim forms while others are taking the MOC quiz.

Saturday 5:30 to 7:00 pm

SUBSTITUTE PRACTICUM

Optional Gentle Yoga Class

RAJAN NARAYANAN

This can be attended by those who missed the morning session of Practicum- 3 for credits.

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4. FACULTY PROFILE

				
Dilip Sarkar, M.D., FACS, CAP – Founding Board Member of Life in Yoga Institute	Sat Bir Singh Khalsa, Ph.D., Assistant Professor of Medicine at Harvard Medical School	C. Rajan Narayanan, Ph.D., Executive Director, Life in Yoga Foundation and Institute	Anju Preet, Ph.D., Assistant CME Director, Life in Yoga Institute	Marsha Billes, D.O., Practicing Physician and Chair of Board of Life in Yoga Institute

Detailed Faculty Profiles

Dilip Sarkar, M.D., FACS, CAP – Founding Board Member of Life in Yoga Institute

Dr. Dilip Sarkar is an expert in Yoga Therapy who combines his 45-year experience in Conventional Medicine with his knowledge of Integrative Medicine, Ayurveda and Yoga Therapy. Dr. Sarkar completed his Surgery internship and residency at St. Joseph Mercy Hospital in Michigan. Thereafter he underwent a fellowship in Cardiovascular Surgery at the Arizona Heart Institute in Phoenix.

He was formerly an Assoc. Prof. of Surgery at Eastern Virginia Medical School in Norfolk, Virginia, and Chairman of the Department of Surgery and Chief of Staff at Portsmouth General Hospital. He is a Fellow of the American College of Surgeons, American Association of Integrative Medicine (AAIM) and other esteemed societies. In 2010, in Life in Yoga Institute in collaboration with Howard University College of Medicine, he was a key member of the initiating team that started the first category one ACCME approved CME course in USA on Yoga Therapy for Medical Professionals. Dr. Sarkar has served the Commonwealth of Virginia as an advisor to the Governor’s office. He serves on the American Heart Association Board, Hampton Roads, Virginia Chapter, as member, past chairman and president. He actively promotes the performing arts and cultural enrichment activities throughout Virginia.

Dr. Sarkar developed a profound interest in Ayurvedic medicine. His Ayurvedic training includes the Emerson Theological Institute Dhanvantari Ayurvedic Center. He is retired from medical practice to devoted time to the study of ancient approaches to healing and wellness, both in the Tidewater area of Virginia and in India. Now a Certified Ayurvedic Practitioner, Dr. Sarkar continues to teach classes in Yoga Therapy, Ayurvedic wellness, and Integrative Medicine. He is a registered yoga teacher, and actively teaches Yoga Therapy at several venues locally in Virginia, nationally and internationally.

Through news, radio, and television, Dr. Sarkar has educated countless individuals on subjects related to heart disease, medical research, and Yoga Therapy. Over the years, his talks have spanned from research in vascular surgery to stress management to yoga therapy to Patanjali’s Yoga Sutras.

He serves on several healthcare boards and is a Life Member of NAMA (National Ayurvedic Medical Association), President of IAYT (International Association of Yoga Therapists), and Fellow of AAIM (American Association of Integrative Medicine). He is a Certified Ayurvedic Practitioner, and teaches classes in Yoga Therapy, Ayurvedic wellness, and Integrative Medicine. In 2016 he authored a book entitled ***Yoga Therapy, Ayurveda, and Western Medicine: A Healthy Convergence***.

Currently, he is also the Chairman, School of Integrative Medicine, Taksha University, Hampton, Virginia.

Sat Bir Singh Khalsa, Ph.D., Assistant Professor of Medicine at Harvard Medical School

Dr. Khalsa received his doctorate in human physiology and neuroscience at the University of Toronto and has conducted research in neuroscience, biological rhythms, sleep and sleep disorders since 1978. Since 2001 he has been fully engaged in basic and clinical research on the effectiveness of yoga and meditation practices in improving physical and psychological health. He has also been personally involved in the practice of a yoga lifestyle since 1973 and is a certified instructor in Kundalini Yoga as taught by Yogi Bhajan. He is currently the Director of Research for the Kundalini Research Institute, Director of Yoga Research for the Yoga Alliance and an Assistant Professor of Medicine at Harvard Medical School in the Department of Medicine at Brigham and Women's Hospital in Boston.

He has conducted clinical research trials evaluating a yoga treatment for insomnia funded by the National Center for Complementary and Integrative Health of the National Institutes of Health. This research was targeted at examining not only the efficacy of yoga for the treatment of chronic insomnia, but also the neuroendocrine and neuropsychological mechanisms underlying the effectiveness of yoga practices in this population. He has also been involved in yoga research for addiction, back pain, performance anxiety, chronic stress, and generalized anxiety disorder. He has also evaluated the efficacy of yoga in treating post-traumatic stress disorder in military veterans (in association with researchers at the Trauma Center of Boston University). He has completed research projects for evaluation of a yoga program within the academic curriculum of public schools to determine the benefits to students in mental health characteristics such as perceived stress, resilience, emotion regulation and anxiety and the efficacy of yoga in workplace settings for addressing chronic stress and burnout.

Dr. Khalsa has established relationships with fellow yoga researchers both in the U.S. as well as in Europe and in India. In India he routinely attends and presents at international yoga research conferences and in the U.S. he is actively working with the International Association of Yoga Therapists (IAYT) to promote research on yoga therapy, conducting the annual Symposium on Yoga research and serving as editor-in-chief of the International Journal of Yoga Therapy.

While he is well published in yoga, the book [The Principles and Practice of Yoga in Healthcare](#) is worth special mention. While he served as the chief editor and author, it is perhaps the first comprehensive book in yoga therapy and is a text for this course.

C. Rajan Narayanan, Ph.D., Executive Director & CME Director, Life in Yoga Institute and Foundation

Dr. Narayanan is a founder and inspiration behind Life in Yoga Foundation and Institutes, non-profits formed and active in the Washington metro area. He was visionary behind getting CME accreditation for Life in Yoga and serves as its CME Director. He also serves as the Secretary and a Board member of

the Council for Yoga Accreditation International, an international body that seeks to bring the knowledge of yoga integrated with scientific understanding. He has actively researched different aspects of yoga and has developed many techniques over the last many years that include three modalities of yoga exercises, gentle yoga protocols, chair-based yoga protocols, Dance Yoga, etc. He has also done a complete translation and commentary on the Yoga Sutras of Patanjali. Since 2010 he has been working on techniques of instant measurability of yoga practices. He began with measurements with Electro-Acupuncture tools (used to measure meridian flows of Chinese Medicine) in 2010. Over 2011-12 he completed a research project to measure vitality through electrical conductance in collaboration with SVYASA University in India. In 2012, he also worked with success on a COPD case with the Pulmonologist, Dr. U. Nanavaty. He completed a pilot study on Obstructive Sleep Apnea in collaboration with Dr. Harminder Kaur of Clarksburg Medical Center in 2013-14. End of 2014, he developed measurability with Electro-Photonic Imaging, which has now become part of Life in Yoga's practice method called Measured Yoga Therapy. This is published as ***Bioenergy and Its Impact on Yoga Therapy*** with two co-authors and is available at the National Library of Medicine: <https://pubmed.ncbi.nlm.nih.gov/29755226/>. With this technique in the second half of 2016 he was able to reverse Chronic Fatigue Syndrome of a subject who was suffering for 35 years and had spent 30 years exploring yoga options with many reputed institutions without success.

He began teaching Raaja Yoga in the Washington area as a free community service in January 1998, after Swami Bua of New York City completed a two week course in Hatha Yoga and Praanayaama. He has been a practitioner of Raaja Yoga since 1981 when he learned TM from Maharishi Mahesh Yogi's Institute. Thereafter between 1993 and 1995 he completed coursework on Hatha Yoga, Praanaayaama, and other Raaja Yoga practices at the Satchidananda Ashram in Yogaville, Virginia. In 1998 he became a Reiki Master and subsequently learned Kriya Yoga techniques of the Lahiri Mahashay lineage. He has also viewed religious practices from various religions to understand their yoga effect. To develop a deeper understanding of these practices he has also studied all the major religions of the world.

Outside the field of Yoga, Dr. Narayanan has worked as a marketing consultant and has served as an adjunct faculty in the business school of Georgetown University and other local Universities. Prior to that, in New York he has worked for American Express and BBDO Worldwide in roles of marketing analysis and strategic marketing. He was a full-time faculty at the State University of New York at Cortland from 1985-87. He has Ph.D. in Economics from the State University of New York at Stony Brook.

Anju Preet, Ph.D., Adjunct Instructor at Georgetown University Medical Center, Assistant CME director
Life in Yoga

Dr. Preet received her doctorate in molecular biology and biochemistry from Jawaharlal Nehru University, Delhi, India. Her research involved, reversal of diabetic complications with fenugreek and Vanadium, understanding the underlying molecular mechanisms and effectiveness of alternative treatments in Type I diabetes models. Extending her research in plant-based therapeutics, during her postdoctoral training at Harvard University she studied the efficacy of Marijuana derivatives on treating breast cancer and lung cancer in animal models and the molecular mechanisms involved. After moving to Georgetown University, she focused her research on the efficacy of caloric restriction in cancer

prevention and treatment and the underlying molecular mechanism in breast cancer. As a faculty and director of siRNA screening facility at Georgetown University Medical Center she collaborated with other research faculty to identify novel targets for cancer therapeutics. These inter-disciplinary research collaborations helped her understand that targeted therapies are highly efficacious, but the human body works as a unified system and these rogue cancer cells can work around alternate pathways to evade conventional therapy. Research data available around holistic approach to healing and role of mind in controlling the body functions developed her interest in mindful meditation besides her passion for plant-based therapeutics (basis of Ayurveda in India). To gain further in-depth understanding of the science and physiology behind meditation and array of other integrative therapies (formerly known as alternative therapeutics) including Ayurveda, Yoga, Acupuncture and Energy Medicine she did Masters in Physiology from Georgetown University concentrating on Complementary and Alternative Medicine. Her extensive scientific training, understanding of cell biology and human physiology has given her the confidence to focus on holistic approach to healing. Currently, after 20 years in basic research, she is dedicated to an integrative approach to healing and provides mindfulness based meditative stress-reduction workshops. She is also a certified mindfulness teacher from Mindful Schools, New York..

Marsha Billes, D.O., Practicing Physician and Chair of Board of Life in Yoga Institute

Dr. Marsha Billes is a dedicated Family Physician who has been successful at combining traditional and integrative medicine to reduce chronic disease and promote wellness. She is Board Certified in Family Practice, and Integrative Medicine and she is also Certified by the International Association of Yoga Therapists. She has been using Yoga Therapy and Measured Yoga Therapy in her practice as an additional modality for assessing the health of her patients- both individually as well as teaching chair yoga therapy in a group for the past several years.

Dr. Billes graduated from Michigan State University College of Osteopathic Medicine in 1989 and did her Internship and Family Practice Residency at Beaumont-of Farmington Hills in 1990-1992. She was also Chief of Staff at Beaumont-Farmington Hills in 2003. She continues to serve as an Associate Clinical Professor through MSU-COM. She thoroughly has enjoyed teaching medical students and PA students and she has spent 29 years in private practice. Dr. Billes has also been a National Speaker on Diabetic Neuropathy and treatment with forms of methylated folate.

After spending 4 years working at The Beaumont Weight Control Center in Canton, Michigan, she is now working at the Beaumont Redford Medical Center as well as supervising the Wellness Program at Envision Health – a program which she actually helped develop. Her newest endeavor is forming a partnership with mental health providers at Biowellness doing Integrative Medicine consults there in addition to using Yoga Therapy. Using Yoga as medicine has helped customize patients care as well as empower the patient to lower blood pressure, blood sugar and stress levels in a very safe and effective way. Dr Billes also serves as Chairman of the Board of Life In Yoga Institute and she continues to work with Dr Rajan Narayanan using the Biowell machine which uses photonic imagery to assess stress, vitality and energy levels and organ system balance using pre and post readings with Yoga therapy techniques. She is very excited about sharing these various modalities which have been life changing for her patients and have enhanced her life personally.